



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,151	09/25/2006	Keijo J. Kinnari	TANDBERGS 7	9109
25877	7590	10/13/2009		
JEFFREY PEARCE 34825 SULTAN-STARTUP RD. SULTAN, WA 98294			EXAMINER PAIK, SANG YEOP	
			ART UNIT	PAPER NUMBER
			3742	
			MAIL DATE	DELIVERY MODE
			10/13/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/561,151	<b>Applicant(s)</b> KINNARI ET AL.	
	<b>Examiner</b> SANG Y. PAIK	<b>Art Unit</b> 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2,5 and 8-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,5 and 8-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2, 5 and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holen (US 2002/00287070) in view of view Firmin (US 2004/0253734) or Agee et al (US 2003/0178195).

Holen shows the method and the system claimed including a direct electric heating of a subsea pipeline with an electrical current source, a support device supporting the current source, a first and second electrical connections in contact with the pipeline, and a riser cable having a first and a second electrical conductor for conducting electrical current to the first and second electrical connections, in which the current source provides the current sufficient to cause heating of the pipeline to a desired temperature. But, Holen does not explicitly show its heating temperature that is above the melting point of ice but below the melting point of hydrate, and a second plug-counteracting procedure to remove hydrate plug or ice.

Firmin shows that it is known in the art to use means of chemical injection as well as the pressurization system to remove a hydrate plug, and Agee also shows a known means of depressurization to remove a hydrate plug or ice.

In view of Firmin or Agee, it would have been obvious to one of ordinary skill in the art to adapt Holen with the chemical injection or depressurization to remove a hydrate plug or ice in the pipeline to facilitate a more effective flow in the pipeline.

With respect to the recited temperature, Holen shows varying degrees of current and voltage levels, and it would have been obvious to set the temperature at the recited range or any other suitable range that depends on the intended applications, including the temperature above the melting point above the ice but below the melting point of hydrate as a matter of routine experimentations.

3. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holen in view of Firmin or Agee as applied to claims 2, 5 and 8-11 above, and further in view of Ness et al (US 6,328,583).

Holen in view of Firmin or Agee shows the system claimed except for the support device being a vessel.

Ness shows a support device being a vessel from which an electrical cable is provided therefrom.

In view of Ness, it would have been obvious to one of ordinary skill in the art to adapt Holen, as modified by Holen in view of Firmin or Agee with its support device as that of a vessel, as an alternative means, to provide for a mobile support device that can transport its riser cable to different pipeline locations.

### ***Response to Arguments***

4. Applicant's arguments filed 6/17/09 have been fully considered but they are not persuasive.

The applicant argues Holen does not show the combination of the direct heating and using of chemical injection. It is noted that the Holen clearly teaches of the direct heating to allow an uninterrupted flow in the pipe by applying the power to the pipe line, and the Firmin or Agee reference is applied to show the well known chemical injection method for removing hydrate plugs.

With respect to Holen, the applicant argues Holen requires a power demand of at least 60 kW where as the claimed invention the required power demand is 3.9 kW. It is noted, however, the applicant discloses on page 4 that the power requirement is 3.9 MW instead of 3.9 kW. But, in any event, it is noted that Holen shows a wide range of power output having 5 to 40 KV with the current supply of 600 to 1.600 A which would encompass the applicant's power demand. Such range would allow one of ordinary skill to vary the power outputs as a matter of routine experimentations.

With respect to the combination of Holen with Firmin or Agee, the applicant argues such combination is based on hindsight of the applicant's invention. This argument is not deemed persuasive since Holen, Firmin, and Agee are in the same field of endeavor wherein Holen was also concerned about prevent blockage in the pipe as does in Firmin or Agee wherein the hydrate plugging helps the fluid flow. Since the applied prior art is in the same field of endeavor to achieve a common objective which is to improve the fluid flow, the combination is deemed proper. Furthermore, in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long

Art Unit: 3742

as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

With respect to Ness, it is noted that Ness is taught to show the use of a vessel wherein the riser cable as well as the means for delivering current and voltage is shown in Holen. The combination is deemed proper since they are in the same field of endeavor which is in field of direct heating cable system for the subsea pipelines.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 3742

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SANG Y. PAIK whose telephone number is (571) 272-4783. The examiner can normally be reached on M-F (9:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on (571) 272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SANG Y PAIK/

Primary Examiner, Art Unit 3742